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OCTOBER 1986

CHILTON'S

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OCTOBER 1986 VOLUME 166, No.10

CHILTON'S AUTOMOTIVE INDUSTRIES SINCE 1895

'87 Allante: Photo by Cadillac

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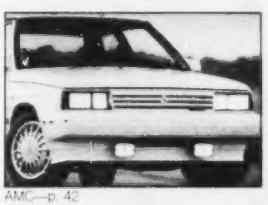

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Foreign Multi-Valvers Crowd US Market

by Joseph M. Callahan

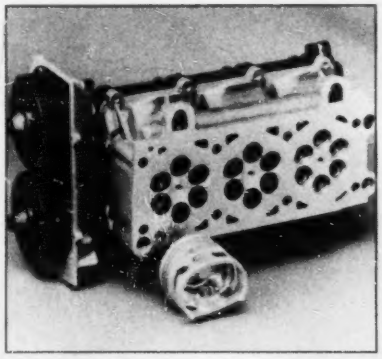
Over the past two years, twin-cam engines, previously all built by foreign manufacturers, have exploded into 271,550 unit market.

A total of twelve cars on the US market are now equipped with four valves per cylinder; this will increase to 23 models within 12-15 months.

Leader of the pack is Toyota with about 200,000 multi-valve engines now installed in five car lines marketed in this US. Worldwide, Toyota has sold over a million of the engines.

Much to the Big Three's embarrassment, the first US twin-cam engine—Oldsmobile's Quad 4—won't appear until 1988. It will be featured in GM's N-cars—Olds' Calais, Buick's Somerset and Pontiac's Grand Am. Chrysler's Italian-built Q-car will get a 16-valve four-cylinder engine when in debuts.

While nothing has been announced, the US could see Mazda's 16-valve and turbocharged 323 model which has already debuted in Japan.



An extreme example of multi-valveism yet to make it Stateside: Maserati's six-valves per cylinder V6.

Nissan features 16-valve engines in its home market Cherry and Pulsar models. Rumor has it Suzuki is looking at four-valve heads for its tiny Swift (Chevy Sprint in the US).

Advantages claimed for the multi-valve engine compared with the turbo approach are: Better fuel economy; no turbo lag; better reliability; lower maintenance costs; and improved engine life. At the same time, the improved breathing makes the engine much less prone to detonation and allows it to burn cleaner. AI

Air Heads On Parade

(Multi-Valve Engines sold in or coming to the United States)

Car	Size	Engine Features	How Many	Intro
Acura Legend	2.5 L	V6, SOHC, FI	7740	1986
Acura Integra	1.6 L	IL four, DOHC, FI	9965	1986
Toyota Corolla GTS	1.6 L	IL four, FI, DOHC	[1]	1985
Toyota Tercel	1.5 L	IL four, 12 valves, FI, DOHC	[1]	1987
Toyota Camry	2.0 L	IL four, FI, DOHC	[1]	1987
Toyota Celica GTS	2.0 L	IL four, FI, DOHC	[1]	1986
Toyota MR2	1.6 L	IL four, FI, DOHC	[1]	1985
Toyota FX16	1.6 L	IL four, FI, DOHC	[1]	1987
Toyota Supra	3.0 L	IL six, FI, DOHC	[1]	1986
Mercedes 190	2.3 L	IL four, FI, DOHC	1000	1986
VW Scirocco	1.8 L	IL Four, FI, DOHC	1368	1986
VW Golf GT	1.8 L	IL four, FI, DOHC	NA	1987
VW Jetta	1.8 L	IL four, FI, DOHC	NA	1987
Saab 900 Turbo	2.1 L	IL four, FI, DOHC	24,500	1985
Saab 900 S	2.1 L	IL four, FI, DOHC	13,800	1986
Saab 9000 Turbo	2.1 L	IL four,FI, Turbo, DOHC	9000	1986
Porsche 928 S	5.0 L	V8, 32 valve, FI, DOHC	4177	1985
Porsche 944 S	2.5 L	IL four, FI, DOHC	NA	1987
Jaguar XJ40	3.8 L	IL six, FI, DOHC	NA	1987
Olds Calais	2.3 L	IL four, FI, DOHC	NA	1988
Buick Somerset	2.3 L	IL four, FI, DOHC	NA	1988
Pontiac Grand Am	2.3 L	IL four, FI, DOHC	NA	1988
Chrysler Q Car	2.2 L	IL four, FI, DOHC	NA	1988

FI—Fuel Injected IL—In-Line SOHC—Single Overhead Cam DOHC—Double Overhead Cam [1]—Total Toyota, 200,000 engines

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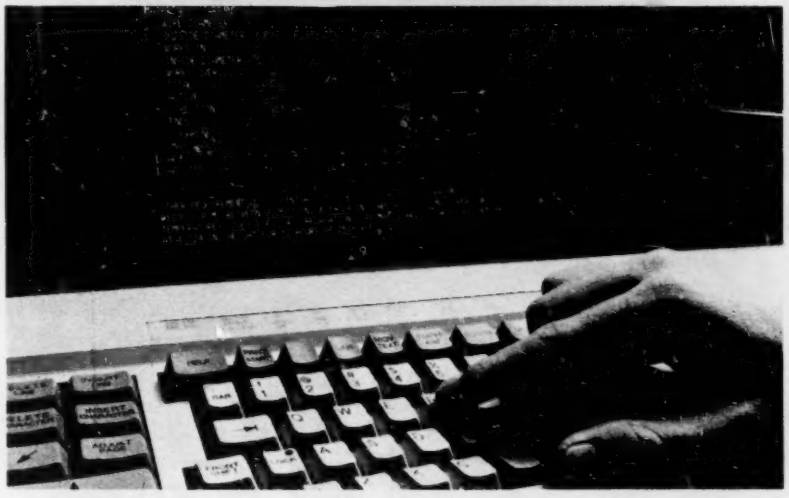

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